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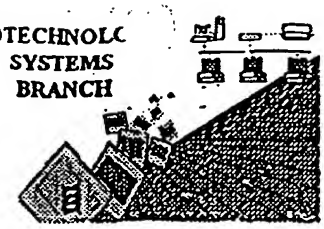

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/812,315
Source: IFW0
Date Processed by STIC: 4/6/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221
***Effective 12/13/03*: TELEPHONE: 571-272-2510: FAX: 571-273-0221**

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/03):-
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/812,315

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1	Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2	Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3	Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4	Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5	Variable Length	Sequence(s) ____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6	PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7	Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown). This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8	Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9	Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
10 ✓	Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence.
11	Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 07/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12	PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13	Misuse of n/Xaa	"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid

IFWO

RAW SEQUENCE LISTING DATE: 04/06/2004
PATENT APPLICATION: US/10/812,315 TIME: 10:51:23

Input Set : A:\Sequence Listing 81000.txt
Output Set: N:\CRF4\04062004\J812315.raw

```
      4 <110> APPLICANT: Degussa AG
      6 <120> TITLE OF INVENTION: A process for producing L-amino acids using strains of the
      7       Enterobacteriaceae family
      9 <130> FILE REFERENCE: 020481 BT
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/812,315
C--> 11 <141> CURRENT FILING DATE: 2004-03-30
     11 <160> NUMBER OF SEQ ID NOS: 4
     13 <170> SOFTWARE: PatentIn version 3.1
     15 <210> SEQ ID NO: 1
     16 <211> LENGTH: 32
     17 <212> TYPE: DNA
     18 <213> ORGANISM: Synthetic sequence
     21 <220> FEATURE:
W--> 22 <221> NAME/KEY: Primer
     23 <222> LOCATION: (1)..(32)
     24 <223> OTHER INFORMATION: galP1
     27 <400> SEQUENCE: 1
     28 cacaatctag ataaaccata ttggagggca tc                                    32
     30 <210> SEQ ID NO: 2
     31 <211> LENGTH: 25
     32 <212> TYPE: DNA
     33 <213> ORGANISM: Synthetic sequence
     36 <220> FEATURE:
W--> 37 <221> NAME/KEY: Primer
     38 <222> LOCATION: (1)..(25)
     39 <223> OTHER INFORMATION: galP2
     42 <400> SEQUENCE: 2
     43 gggaggaagc ttggggagat taatc                                            25
     45 <210> SEQ ID NO: 3
     46 <211> LENGTH: 1446
     47 <212> TYPE: DNA
     48 <213> ORGANISM: Escherichia coli
     51 <220> FEATURE:
W--> 52 <221> NAME/KEY: DNA fragment
     53 <222> LOCATION: (1)..(1446)
     54 <223> OTHER INFORMATION: PCR product
     57 <220> FEATURE:
     58 <221> NAME/KEY: CDS
     59 <222> LOCATION: (33)..(1427)
     60 <223> OTHER INFORMATION: galP coding region
W--> 61 <400> SEQUENCE: 3
     62 cacaatctag ataaaccata ttggagggca tc atg cct gac gct aaa aaa cag        53
     63                                    Met Pro Asp Ala Lys Lys Gln
```

Invalid Response, <213> has to be either Artificial/Unknown OR Genus/Species.

Does Not Comply
Corrected Diskette Needed (Pg 1)

Please see item #10 ON error summary sheet.

Invalid Response, same error

RAW SEQUENCE LISTING DATE: 04/06/2004
PATENT APPLICATION: US/10/812,315 TIME: 10:51:23

Input Set : A:\Sequence Listing 81000.txt
Output Set: N:\CRF4\04062004\J812315.raw

```
64                                  1               5
66 ggg cgg tca aac aag gca atg acg ttt ttc gtc tgc ttc ctt gcc gct      101
67 Gly Arg Ser Asn Lys Ala Met Thr Phe Phe Val Cys Phe Leu Ala Ala
68         10                  15                  20
70 ctg gcg gga tta ctc ttt ggc ctg gat atc ggt gta att gct ggc gca      149
71 Leu Ala Gly Leu Leu Phe Gly Leu Asp Ile Gly Val Ile Ala Gly Ala
72     25                  30                  35
74 ctg ccg ttt att gca gat gaa ttc cag att act tcg cac acg caa gaa      197
75 Leu Pro Phe Ile Ala Asp Glu Phe Gln Ile Thr Ser His Thr Gln Glu
76 40                  45                  50                  55
78 tgg gtc gta agc tcc atg atg ttc ggt gcg gca gtc ggt gcg gtg ggc      245
79 Trp Val Val Ser Ser Met Met Phe Gly Ala Ala Val Gly Ala Val Gly
80                 60                  65                  70
82 agc ggc tgg ctc tcc ttt aaa ctc ggg cgc aaa aag agc ctg atg atc      293
83 Ser Gly Trp Leu Ser Phe Lys Leu Gly Arg Lys Lys Ser Leu Met Ile
84             75                  80                  85
86 ggc gca att ttg ttt gtt gcc ggt tcg ctg ttc tct gcg gct gcg cca      341
87 Gly Ala Ile Leu Phe Val Ala Gly Ser Leu Phe Ser Ala Ala Ala Pro
88         90                  95                  100
90 aac gtt gaa gta ctg att ctt tcc cgc gtt cta ctg ggg ctg gcg gtg      389
91 Asn Val Glu Val Leu Ile Leu Ser Arg Val Leu Leu Gly Leu Ala Val
92     105                 110                 115
94 ggt gtg gcc tct tat acc gca ccg ctg tac ctc tct gaa att gcg ccg      437
95 Gly Val Ala Ser Tyr Thr Ala Pro Leu Tyr Leu Ser Glu Ile Ala Pro
96 120                 125                 130                 135
98 gaa aaa att cgt ggc agt atg atc tcg atg tat cag ttg atg atc act      485
99 Glu Lys Ile Arg Gly Ser Met Ile Ser Met Tyr Gln Leu Met Ile Thr
100                140                 145                 150
102 atc ggg atc ctc ggt gct tat ctt tct gat acc gcc ttc agc tac acc      533
103 Ile Gly Ile Leu Gly Ala Tyr Leu Ser Asp Thr Ala Phe Ser Tyr Thr
104            155                 160                 165
106 ggt gca tgg cgc tgg atg ctg ggt gtg att atc atc ccg gca att ttg      581
107 Gly Ala Trp Arg Trp Met Leu Gly Val Ile Ile Ile Pro Ala Ile Leu
108        170                 175                 180
110 ctg ctg att ggt gtc ttc ttc ctg cca gac agc cca cgt tgg ttt gcc      629
111 Leu Leu Ile Gly Val Phe Phe Leu Pro Asp Ser Pro Arg Trp Phe Ala
112    185                 190                 195
114 gcc aaa cgc cgt ttt gtt gat gcc gaa cgc gtg ctg cta cgc ctg cgt      677
115 Ala Lys Arg Arg Phe Val Asp Ala Glu Arg Val Leu Leu Arg Leu Arg
116 200                205                 210                 215
118 gac acc agc gcg gaa gcg aaa cgc gaa ctg gat gaa atc cgt gaa agt      725
119 Asp Thr Ser Ala Glu Ala Lys Arg Glu Leu Asp Glu Ile Arg Glu Ser
120                220                 225                 230
122 ttg cag gtt aaa cag agt ggc tgg gcg ctg ttt aaa gag aac agc aac      773
123 Leu Gln Val Lys Gln Ser Gly Trp Ala Leu Phe Lys Glu Asn Ser Asn
124            235                 240                 245
126 ttc cgc cgc gcg gtg ttc ctt ggc gta ctg ttg cag gta atg cag caa      821
127 Phe Arg Arg Ala Val Phe Leu Gly Val Leu Leu Gln Val Met Gln Gln
128        250                 255                 260
```

RAW SEQUENCE LISTING DATE: 04/06/2004
PATENT APPLICATION: US/10/812,315 TIME: 10:51:23

Input Set : A:\Sequence Listing 81000.txt
Output Set: N:\CRF4\04062004\J812315.raw

```
130 ttc acc ggg atg aac gtc atc atg tat tac gcg ccg aaa atc ttc gaa      869
131 Phe Thr Gly Met Asn Val Ile Met Tyr Tyr Ala Pro Lys Ile Phe Glu
132     265                 270                 275
134 ctg gcg ggt tat acc aac act acc gag caa atg tgg ggg acc gtg att      917
135 Leu Ala Gly Tyr Thr Asn Thr Thr Glu Gln Met Trp Gly Thr Val Ile
136 280                 285                 290                 295
138 gtc ggc ctg acc aac gta ctt gcc acc ttt atc gca atc ggc ctt gtt      965
139 Val Gly Leu Thr Asn Val Leu Ala Thr Phe Ile Ala Ile Gly Leu Val
140                 300                 305                 310
142 gac cgc tgg gga cgt aaa cca acg cta acg ctg ggc ttc ctg gtg atg     1013
143 Asp Arg Trp Gly Arg Lys Pro Thr Leu Thr Leu Gly Phe Leu Val Met
144             315                 320                 325
146 gct gct ggc atg ggc gta ctc ggt aca atg atg cat atc ggt att cac     1061
147 Ala Ala Gly Met Gly Val Leu Gly Thr Met Met His Ile Gly Ile His
148         330                 335                 340
150 tct ccg tcg gcg cag tat ttc gcc atc gcc atg ctg ctg atg ttt att     1109
151 Ser Pro Ser Ala Gln Tyr Phe Ala Ile Ala Met Leu Leu Met Phe Ile
152     345                 350                 355
154 gtc ggt ttt gcc atg agt gcc ggt ccg ctg att tgg gta ctg tgc tcc     1157
155 Val Gly Phe Ala Met Ser Ala Gly Pro Leu Ile Trp Val Leu Cys Ser
156 360                 365                 370                 375
158 gaa att cag ccg ctg aaa ggc cgc gat ttt ggc atc acc tgc tcc act     1205
159 Glu Ile Gln Pro Leu Lys Gly Arg Asp Phe Gly Ile Thr Cys Ser Thr
160                 380                 385                 390
162 gcc acc aac tgg att gcc aac atg atc gtt ggc gca acg ttc ctg acc     1253
163 Ala Thr Asn Trp Ile Ala Asn Met Ile Val Gly Ala Thr Phe Leu Thr
164             395                 400                 405
166 atg ctc aac acg ctg ggt aac gcc aac acc ttc tgg gtg tat gcg gct     1301
167 Met Leu Asn Thr Leu Gly Asn Ala Asn Thr Phe Trp Val Tyr Ala Ala
168         410                 415                 420
170 ctg aac gta ctg ttt atc ctg ctg aca ttg tgg ctg gta ccg gaa acc     1349
171 Leu Asn Val Leu Phe Ile Leu Leu Thr Leu Trp Leu Val Pro Glu Thr
172     425                 430                 435
174 aaa cac gtt tcg ctg gaa cat att gaa cgt aat ctg atg aaa ggt cgt     1397
175 Lys His Val Ser Leu Glu His Ile Glu Arg Asn Leu Met Lys Gly Arg
176 440                 445                 450                 455
178 aaa ctg cgc gaa ata ggc gct cac gat taa tctccccaag cttcctccc        1446
179 Lys Leu Arg Glu Ile Gly Ala His Asp
180                 460
182 <210> SEQ ID NO: 4
183 <211> LENGTH: 464
184 <212> TYPE: PRT
185 <213> ORGANISM: Escherichia coli
188 <400> SEQUENCE: 4
189 Met Pro Asp Ala Lys Lys Gln Gly Arg Ser Asn Lys Ala Met Thr Phe
190 1               5                  10                  15
192 Phe Val Cys Phe Leu Ala Ala Leu Ala Gly Leu Leu Phe Gly Leu Asp
193             20                  25                  30
195 Ile Gly Val Ile Ala Gly Ala Leu Pro Phe Ile Ala Asp Glu Phe Gln
```

RAW SEQUENCE LISTING DATE: 04/06/2004
PATENT APPLICATION: US/10/812,315 TIME: 10:51:23

Input Set : A:\Sequence Listing 81000.txt
Output Set: N:\CRF4\04062004\J812315.raw

```
196          35                  40                  45
198 Ile Thr Ser His Thr Gln Glu Trp Val Val Ser Ser Met Met Phe Gly
199      50                  55                  60
201 Ala Ala Val Gly Ala Val Gly Ser Gly Trp Leu Ser Phe Lys Leu Gly
202 65                   70                  75                  80
204 Arg Lys Lys Ser Leu Met Ile Gly Ala Ile Leu Phe Val Ala Gly Ser
205                  85                  90                  95
207 Leu Phe Ser Ala Ala Ala Pro Asn Val Glu Val Leu Ile Leu Ser Arg
208              100                 105                 110
210 Val Leu Leu Gly Leu Ala Val Gly Val Ala Ser Tyr Thr Ala Pro Leu
211          115                 120                 125
213 Tyr Leu Ser Glu Ile Ala Pro Glu Lys Ile Arg Gly Ser Met Ile Ser
214      130                 135                 140
216 Met Tyr Gln Leu Met Ile Thr Ile Gly Ile Leu Gly Ala Tyr Leu Ser
217 145                  150                 155                 160
219 Asp Thr Ala Phe Ser Tyr Thr Gly Ala Trp Arg Trp Met Leu Gly Val
220                  165                 170                 175
222 Ile Ile Ile Pro Ala Ile Leu Leu Leu Ile Gly Val Phe Phe Leu Pro
223              180                 185                 190
225 Asp Ser Pro Arg Trp Phe Ala Ala Lys Arg Arg Phe Val Asp Ala Glu
226          195                 200                 205
228 Arg Val Leu Leu Arg Leu Arg Asp Thr Ser Ala Glu Ala Lys Arg Glu
229      210                 215                 220
231 Leu Asp Glu Ile Arg Glu Ser Leu Gln Val Lys Gln Ser Gly Trp Ala
232 225                  230                 235                 240
234 Leu Phe Lys Glu Asn Ser Asn Phe Arg Arg Ala Val Phe Leu Gly Val
235                  245                 250                 255
237 Leu Leu Gln Val Met Gln Gln Phe Thr Gly Met Asn Val Ile Met Tyr
238              260                 265                 270
241 Tyr Ala Pro Lys Ile Phe Glu Leu Ala Gly Tyr Thr Asn Thr Thr Glu
242          275                 280                 285
244 Gln Met Trp Gly Thr Val Ile Val Gly Leu Thr Asn Val Leu Ala Thr
245      290                 295                 300
247 Phe Ile Ala Ile Gly Leu Val Asp Arg Trp Gly Arg Lys Pro Thr Leu
248 305                  310                 315                 320
250 Thr Leu Gly Phe Leu Val Met Ala Ala Gly Met Gly Val Leu Gly Thr
251                  325                 330                 335
253 Met Met His Ile Gly Ile His Ser Pro Ser Ala Gln Tyr Phe Ala Ile
254              340                 345                 350
256 Ala Met Leu Leu Met Phe Ile Val Gly Phe Ala Met Ser Ala Gly Pro
257          355                 360                 365
259 Leu Ile Trp Val Leu Cys Ser Glu Ile Gln Pro Leu Lys Gly Arg Asp
260      370                 375                 380
262 Phe Gly Ile Thr Cys Ser Thr Ala Thr Asn Trp Ile Ala Asn Met Ile
263 385                  390                 395                 400
265 Val Gly Ala Thr Phe Leu Thr Met Leu Asn Thr Leu Gly Asn Ala Asn
266                  405                 410                 415
268 Thr Phe Trp Val Tyr Ala Ala Leu Asn Val Leu Phe Ile Leu Leu Thr
269              420                 425                 430
```

RAW SEQUENCE LISTING DATE: 04/06/2004
PATENT APPLICATION: US/10/812,315 TIME: 10:51:23

Input Set : A:\Sequence Listing 81000.txt
Output Set: N:\CRF4\04062004\J812315.raw

```
271 Leu Trp Leu Val Pro Glu Thr Lys His Val Ser Leu Glu His Ile Glu
272         435                 440                 445
274 Arg Asn Leu Met Lys Gly Arg Lys Leu Arg Glu Ile Gly Ala His Asp
275     450                 455                 460
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VERIFICATION SUMMARY DATE: 04/06/2004
PATENT APPLICATION: US/10/812,315 TIME: 10:51:24

Input Set : A:\Sequence Listing 81000.txt
Output Set: N:\CRF4\04062004\J812315.raw

:11 M:270 C: Current Application Number differs, Replaced Current Application No
:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
:22 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1
:37 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:2
:52 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
:61 M:283 W: Missing Blank Line separator, <400> field identifier